

REMARKS

I. Rejection of Claims 1-3, 6, 11-14, 16 and 19-20 Under 35 U.S.C. § 103 Based Upon Matsunaga and Shimoyama.

Paragraph 1 of the Office Action rejected Claims 1-3, 6, 11-14, 16 and 19-20 under 35 U.S.C. § 103(a) as being unpatentable over Matsunaga, Japanese Patent No. 04-184464 in view of Shimoyama et al., U.S. Patent No. 5,757,578. For the reasons which follow, Applicants respectfully request that the rejection of Claims 1-3, 6, 11-14, 16 and 19-20 be withdrawn.

A. Claim 1.

Claim 1 recites a printing consumable loading assembly including a cartridge holding assembly having a guide assembly and a consumable-containing cartridge insertable into the guide assembly. The guide assembly includes a series of cooperating spring-loaded levers and motor-driven cams for guiding the consumable-containing cartridge to a loaded position when the consumable-containing cartridge is inserted which results in the cartridge holding assembly being moved. Neither Matsunaga nor Shimoyama disclose a printing consumable loading assembly having a guide assembly which guides a consumable-containing cartridge to a loaded in-use position by a series of cooperating spring-loaded levers and motor-driven cams when the consumable-containing cartridge is inserted through a cartridge opening of the imaging system housing. In contrast, Figure 7 of Matsunaga merely discloses a system in which a cartridge 5 is manually loaded into the image forming device (as indicated by the hands in Figure 7). Matsunaga does not disclose a guide assembly that guides a consumable-containing cartridge to a loaded position as the cartridge is inserted through the cartridge opening of the image system housing. Moreover, Matsunaga fails to disclose a guide assembly which includes a series of cooperating spring-loaded levers and motor-driven cams.

In apparent acknowledgment of the deficiencies of Matsunaga, the Office Action additionally relies on Shimoyama et al. The Office Action asserts that "It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a cassette insertion and ejection mechanism disclosed in Shimoyama et al. to move the toner cartridge

because the cassette can be erroneously loaded as taught in Shimoyama et al. Also, see page 5, lines 7-18, of applicant's specification."

However, Shimoyama et al. does not disclose a printing consumable loading assembly having a guide assembly for guiding a consumable-containing cartridge to a loaded position as the cartridge is inserted through the cartridge opening of the imaging system. In contrast, Shimoyama et al. merely discloses a tape cassette loading apparatus. Neither Shimoyama nor Matsunaga provide any motivation or suggestion to utilize the loading apparatus of Shimoyama in a printing consumable loading assembly for loading consumable-containing cartridges. The fact that a "cassette can be erroneously loaded as taught in Shimoyama et al." is of no relevance to the loading of a consumable-containing cartridge into an imaging system. Nothing in Matsunaga appears to suggest any difficulty in loading toner cartridge 5 once door 30 is opened. Moreover, Shimoyama attempts to solve the problem of cassette tapes being tilted as they are loaded. Matsunaga provides no indication that the tilted loading of toner cartridges is an issue or problem that must be solved

With respect to Applicant's specification, page 5, lines 7-18, merely state that in the art of cassette players, recorders and cassette guiding systems, it is known to use spring-loaded levers and motor-driven cams to guide tape cassettes. The field of image-forming devices is quite different than the field of tape cassette recorders and players. Printing consumable loading assemblies utilize cartridges containing consumables such as ink or toner. In contrast, cassette systems simply record on tape. Absent Applicant's own disclosure, it would not be obvious to one of ordinary skill in the image-forming art to refer to or incorporate the known tape cassette guiding system. The assertion in the Office Action that it would be obvious to modify the image-forming device of Matsunaga to include the tape cassette loading system of Shimoyama appears to use Applicant's own disclosure as a blueprint for combining references. Such hindsight reasoning is impermissible. Accordingly, Applicants respectfully request that the rejection of independent Claim 1 based upon Matsunaga in view of Shimoyama be withdrawn. Claims 2-6, 8-9 and 11-12 depend from Claim 1 and are believed to be patentably distinct over the prior art of record for the same reasons.

B. Claim 3.

Claim 3 depends from Claims 2 and 1 and further recites that the assembly includes an ejection mechanism which is adapted to selectively eject a consumable-containing cartridge from the holding assembly. Neither Matsunaga nor Shimoyama, alone or in combination, discloses such an assembly. In contrast, Matsunaga merely discloses gears 22, 23 which move cartridge 5 from an in-use position to a position upon a carousel 11. Carousel 11 appears to simply rotate the series of cartridges about an axis. Carousel 11 does not eject cartridges 5 through the opening when door 30 is opened. In contrast, as shown by Figure 7, Matsunaga requires an individual to physically reach down, disconnect and lift cartridge 5 out of the device.

As discussed above, it would not be obvious to one of ordinary skill in the image-forming art to refer to or incorporate the tape cassette loading apparatus of Shimoyama et al. absent Applicant's own disclosure. Even assuming, arguendo, that it were obvious to modify Matsunaga based upon the tape cassette loading apparatus taught in Shimoyama et al., the resulting combination would still fail to disclose the assembly recited in Claim 3. In particular, Shimoyama et al. relates to a tape cassette loading apparatus configured to ensure that a tape cassette is in the proper orientation when its lid is removed for access to the tape. Matsunaga discloses gears 22, 23 which move cartridge 5 to a location where its seal is opened, enabling toner to be emptied. At most, the alleged hypothetical combination of Matsunaga and Shimoyama, would result in gears 22, 23 being replaced by the cassette-loading apparatus of Shimoyama. The resulting combination would still fail to disclose an ejection mechanism that ejects a consumable-containing cartridge from the image-forming device. Thus, Applicants respectfully request that the rejection of Claim 3 be withdrawn for these additional reasons. Claims 4 and 5 depend from Claim 3 and are believed to be patentably distinct over the prior art of record for the same reasons.

C. Claim 5.

Claim 5 depends from Claim 3 and further recites that the assembly is adapted to automatically eject the consumable-containing cartridge when a sensor indicates that as the

quantity of consumable within the cartridge is at a predetermined level. Neither Matsunaga nor Shimoyama disclose such an assembly. In contrast, Matsunaga merely discloses gears 22 and 23 which move cartridge 5 to carousel 11 upon the cartridge being made empty. Matsunaga does not disclose a device which ejects cartridge 5 past an open door 30 upon the toner within the cartridge 5 being at a predetermined level. Thus, Applicant requests that the rejection of Claim 5 be withdrawn for this additional reason.

D. Claim 13.

Independent Claim 13 recites an imaging system which includes a housing, at least one cartridge opening, a loading assembly and at least one consumable-containing cartridge. The loading assembly includes a guide assembly that receives a consumable-containing cartridge as it is inserted through a cartridge opening in the imaging system housing and which includes a series of spring-loaded levers and cooperating motor-drive cams to guide and transport the consumables cartridge to an in-use position.

Neither Matsunaga nor Shimoyama disclose an imaging system having a guide assembly which receives a consumable-containing cartridge as it is inserted through an opening in the housing and which also utilizes a series of spring-loaded levers and cooperating motor-driven cams to guide and transport the cartridge to an in-use position. In contrast, Matsunaga merely discloses a carousel 11 and cartridge-conveying gears 22 and 23. Matsunaga does not disclose a guide assembly which utilizes spring-loaded levers and cooperating motor-driven cams to receive the consumable-containing cartridge and to move the consumable-containing cartridge to an in-use position.

In apparent acknowledgement of this deficiency, the Office Action additionally relies Shimoyama et al. However, as discussed above with respect to the rejection of Claim 1, it would not be obvious to modify the image-forming device of Matsunaga based upon the tape cassette-loading apparatus disclosed by Shimoyama absent Applicant's own disclosure serving as a blueprint. Accordingly, Applicants request that the rejection of Claim 13 be withdrawn. Claims 14-19 depend from Claim 13 and are believed to be patentably distinct over the prior art of record for the same reasons.

E. Claim 14.

Claim 14 depends from Claim 13 and further recites the imaging system includes an ejection mechanism adapted to eject the consumable-containing cartridge. Neither Matsunaga nor Shimoyama et al. disclose an imaging system having an injection mechanism adapted to inject the consumable containing cartridge. In contrast, Matsunaga merely discloses gears 22, 23 which move cartridge 5 from an in-use position to a position upon a carousel 11. Carousel 11 appears to simply rotate the series of cartridges about an axis. Carousel 11 does not eject cartridges 5 through the opening when door 30 is opened. In contrast, as shown by Figure 7, Matsunaga requires an individual to physically reach down, disconnect and lift cartridges 5 out of the device. As discussed above, it would not be obvious to one of ordinary skill in the image-forming art to refer to or incorporate the tape cassette loading apparatus of Shimoyama et al. absent applicants own disclosure. Even assuming arguendo, that it were obvious to modify Matsunaga based upon the tape cassette loading apparatus taught in Shimoyama et al., the resulting combination would still fail to disclose the assembly recited in claim 14. In particular, Shimoyama et al. relates to a tape cassette loading apparatus configured to ensure that a tape cassette is in the proper orientation when its lid is removed for access to the tape. Matsunaga discloses gears 22, 23 which move cartridge 5 to a location where it seals open, enabling toner to be emptied. At most, the alleged hypothetical combination of Matsunaga and Shimoyama et al. would result in gears 22, 23 being replaced by the cassette-loading apparatus of Shimoyama et al. The resulting combination would still fail to disclose an ejection mechanism that ejects a consumable-containing cartridge from an imaging forming device. Thus, applicants request that the rejection of claim 14 be withdrawn for these additional reasons.

F. Claim 20.

Claim 20 recites a method of loading a consumable-containing cartridge in an imaging system having a guide assembly wherein the guide assembly utilizes a series of cooperating spring-loaded levers and motor-driven cams to guide a consumable-containing cartridge to a loaded position. The method includes inserting the consumable-containing cartridge into the cartridge-holding assembly through the cartridge opening formed in the system housing. The

consumable-containing cartridge is received in the cartridge-holding assembly as it is inserted through the cartridge opening and is guided into an in-use position within the cartridge-holding assembly.

Neither Matsunaga nor Shimoyama disclose a method of loading a consumable-containing cartridge into an imaging system having a guide assembly which utilizes a series of cooperating spring-loaded levers and motor-driven cams to guide the consumable-containing cartridge to a loaded position. In contrast, Matsunaga merely discloses a carousel 11 and gears 22 and 23.

In apparent acknowledgement of the deficiencies of Matsunaga, the Office Action additionally relies on Shimoyama et al. However, as noted above with respect to the rejection of Claim 1, it would not be obvious to modify the image-forming device of Matsunaga based upon the tape cassette loading apparatus of Shimoyama absent the use of Applicant's own disclosure as a blueprint. Because such hindsight is impermissible, Applicants respectfully request that the rejection of Claim 20 based upon Matsunaga in view of Shimoyama be withdrawn.

II. The Rejection of Claims 4-5 and 15 Under 35 U.S.C. § 103 Based Upon Matsunaga, Shimoyama and Tani.

Paragraph 2 of the Office Action rejected Claims 4-5 and 15 under 35 U.S.C. § 103 as being unpatentable over Matsunaga in view of Shimoyama and further in view of Tani et al., U.S. Patent No. 4,977,429. Claims 4 and 5 depend from Claim 1 and are believed to be patentably distinct over the prior art of record for the same reasons as discussed above with respect to Claim 1. Claim 15 depends from Claim 13 and is believed to be patentably distinct over the prior art of record for the same reasons discussed above with respect to Claim 13. Accordingly, Applicants request that the rejection of Claims 4-5 and 15 based upon Matsunaga, Shimoyama and Tani be withdrawn.

III. Rejection of Claims 1, 6, 8-9, 13 and 26-18 Under 35 U.S.C. § 103 Based Upon Kitajima, Shimoyama and Kasamura.

Paragraph 3 of the Office Action rejected Claims 1, 6, 8-9, 13 and 26-18 under 35 U.S.C. § 103 as being unpatentable over Kitajima, U.S. Patent No. 6,091,912 in view of Shimoyama et al., U.S. Patent No. 5,757,578, and Kasamura et al., U.S. Patent No. 4,611,899. For the reasons which follow, Applicants respectfully request that the rejection of Claims 1, 6, 8-9, 13 and 26-18 be withdrawn.

A. Claim 1.

Claim 1 recites a printing consumable loading assembly including a cartridge holding assembly having a guide assembly and a consumable-containing cartridge insertable into the guide assembly. The guide assembly includes a series of cooperating spring-loaded levers and motor-driven cams for guiding the consumable-containing cartridge to a loaded position when the consumable-containing cartridge is inserted which results in the cartridge holding assembly being moved.

Neither Kitajima, Shimoyama nor Kasamura disclose a printing consumable-loading assembly having a guide assembly which guides a consumable-containing cartridge to a loaded in-use position by a series of cooperating spring-loaded levers and motor-driven cams when the consumable containing cartridge is inserted through a cartridge opening of the imaging system housing. In contrast, Kitajima merely discloses an imaging system having a plurality of openings 2 which receive toner cartridges 1. As acknowledged in the Office Action, Kitajima does not disclose a guide assembly which receives the consumable-containing cartridge as it is inserted through the cartridge opening of the system and which guides the cartridge to an in-use position utilizing a series of cooperating spring-loaded levers and motor-driven cams.

In recognition of the deficiencies of Kitajima, the Office Action additionally relies on Shimoyama et al. However, as noted above with respect to the rejection of Claim 1, it would not be obvious to one of ordinary skill in the imaging system art to modify an imaging device based upon the tape cassette loading apparatus disclosed by Shimoyama absent the use of

Applicant's own disclosure as a blueprint. Shimoyama fails to provide any motivation or suggestion for using its tape-loading apparatus in an imaging system to load the consumable-containing cartridge. Neither Kitajima nor Kasamura provide any motivation or suggestion for the modification using features of a tape-loading apparatus. Kasamura merely discloses an electro photographic system having a developer receptacle 22 into which a developer cartridge is inserted. Accordingly, Applicants respectfully request that the rejection of Claim 1 based upon Kitajima, Shimoyama and Kasamura be withdrawn. Claims 6 and 8-9 depend from Claim 1 and overcome the rejection for the same reasons.

B. Claim 13.

Claim 13 recites an imaging system which includes a housing, at least one cartridge opening, a loading assembly and at least one consumable-containing cartridge. The loading assembly includes a guide assembly that receives a consumable-containing cartridge as it is inserted through a cartridge opening in the imaging system housing and which includes a series of spring-loaded levers and cooperating motor-drive cams to guide and transport the consumables cartridge to an in-use position.

Neither Kitajima, Shimoyama nor Kasamura disclose an imaging system having a guide assembly which receives a consumable-containing cartridge as it is it inserted through an opening in the housing and which also utilizes a series of spring-loaded levers and cooperating motor-driven cams to guide and transport the cartridge to an in-use position. In contrast, Kitajima merely discloses an imaging system having a plurality of openings 2 which receive toner cartridges 1. Moreover, as discussed above with respect to the rejection of Claim 1 based upon Kitajima, Shimoyama and Kasamura, it would not be obvious to modify the image forming device of Kitajima based upon the tape cassette-loading apparatus disclosed by Shimoyama et al. absent applicant's own disclosure serving as a blueprint. Thus, Applicants request that the rejection of Claim 13 based upon Kitajima, Shimoyama and Kasamura be withdrawn. Claims 16-18 depend from Claim 13 and are believed to be patentably distinct over the prior art of record for the same reasons.

IV. Correction of Typographical Errors.

During review of the application, several typographical errors were noted. With respect to Claim 1, the previous amendment filed on July 22, 2003 amended Claim 1 to recite that the guide assembly included a series of cooperating spring-loaded levers and motor-driven cams. This portion of the amendment to Claim 1 was not underlined as added material. However, based upon the Office Action mailed on October 21, 2003, it is apparent that the Examiner acknowledged Claim 1 as being amended to include this additional recitation. Accordingly, it is Applicant's understanding that such an amendment has been entered.

Applicants further noted a grammatical error in claim 1. Claim 1 is amended to correct this grammatical error.

Applicants further noted that Claims 14-18 incorrectly refer to the "printing consumable-loading assembly" rather than the "imaging system" of independent Claim 13. Claims 14-19 are amended to correct this typographical error.

V. Conclusion.

After amending the claims as set forth above, claims 1-6, 8-9 and 11-20 are now pending in this application.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to

Deposit Account No. 06-1447. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 06-1447.

Respectfully submitted,

Date Dec. 3, 2003

By Todd A. Rathe

FOLEY & LARDNER
777 East Wisconsin Avenue, Suite 3800
Milwaukee, Wisconsin 53202-5306
Telephone: (414) 297-5710
Facsimile: (414) 297-4900

Todd A. Rathe
Attorney for Applicant
Registration No. 38,276